

ABSTRACT

A method and apparatus for reducing the servo position error signal non-linearity during self-servo writing irrespective of the head width is disclosed.

Write current of each head is modified based upon the head width. The write width for all heads is measured and a write current for each head in a disk drive is adjusted toward a predetermined level. A mean track propagation width for the disk drive is determined, wherein the predetermined level establishes the determined mean track propagation. A mean head width is determined and the

write current for each head is adjusted by applying a higher write current to heads smaller than the mean head width and a lower write current to heads wider than the mean head width. Optimal performance is achieved using the adjusted write currents. The measuring of the head width is repeated and the write current is adjusted until a track propagation for the disk drive meets a predetermined criteria. The predetermined criteria includes a predetermined

minimum threshold or a minimum variance in track propagation width.